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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,560	10/01/2003	Michael Lee Workman	Pillar 716	3994

7590 11/15/2005
Robert Moll
1173 St. Charles Court
Los Altos, CA 94024

EXAMINER

PARK, ILWOO

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/677,560	Applicant(s) WORKMAN ET AL.	
	Examiner Ilwoo Park	Art Unit 2182	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-7, 22, and 23 are presented for examination.
2. The affidavits along with Exhibits filed on 10/03/2005 under 37 CFR 1.131 have been considered but are ineffective to overcome the Bicknell et al reference.
3. The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Bicknell et al reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897).

Per MPEP 715.07:

A general allegation that the invention was completed prior to the date of the reference is not sufficient. *Ex parte Saunders*, 1883 C.D. 23, 23 O.G. 1224 (Comm'r Pat. 1883). Similarly, a declaration by the inventor to the effect that his or her invention was conceived or reduced to practice prior to the reference date, without a statement of facts demonstrating the correctness of this conclusion, is insufficient to satisfy 37 CFR 1.131.

The affidavit or declaration and exhibits must clearly explain which facts or data applicant is relying on to show completion of his or her invention prior to the particular date. Vague and general statements in broad terms about what the exhibits describe along with a general assertion that the exhibits describe a reduction to practice "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and, thus, does not satisfy the requirements of 37 CFR 1.131(b). *In re Borkowski*, 505 F.2d 713, 184 USPQ 29 (CCPA 1974). Applicant must give a clear explanation of the exhibits pointing out **exactly** what facts are established and relied on by applicant. 505 F.2d at 718-19, 184 USPQ at 33. See also *In re Harry*, 333 F.2d 920, 142 USPQ 164 (CCPA 1964) (Affidavit "asserts that facts exist but does not tell what they are or when they occurred.").

The Examiner has reviewed affidavits along with Exhibits and is of the opinion that they are not adequate to support conception of the claimed invention. For example, the Examiner does not find the support for "D-flip flops" in claim 4 and "reading the status including the board revision" in claim 7. Applicant does not give a clear explanation pointing out exactly what facts are established and relied upon from the Exhibit with respect to this particular limitation. It is to be further understood that the aforementioned limitation in claim 7 is merely one of several examples of insufficient evidence supporting conception of the claimed invention. Since the Exhibit does not support the claimed invention, applicant has not established conception prior to the date of the Bicknell et al reference.

4. In determining the sufficiency of a 37 CFR 1.131 affidavit or declaration, diligence need not be considered unless conception of the invention prior to the effective date is clearly established, since diligence comes into question only after prior conception is established. *Ex parte Kantor*, 177 USPQ (Bd. App. 1958). *Arguendo*, the evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Bicknell et al reference to either a constructive reduction to practice or an actual reduction to practice.

An applicant must account for the entire period during which diligence is required. *Gould v. Schawlow*, 363 F.2d 908, 919, 150 USPQ 634, 643 (CCPA 1966) (Merely stating that there were no weeks or months that the invention was not worked on is not enough.); *In re Harry*, 333 F.2d 920, 923, 142 USPQ 164, 166 (CCPA 1964) (statement that the subject matter "was diligently reduced to practice" is not a showing but a mere pleading). **A 2-day period lacking activity has been held to be fatal.** *In re Mulder*, 716 F.2d 1542, 1545, 219 USPQ 189, 193 (Fed. Cir. 1983) (37 CFR 1.131 issue); *Fitzgerald v. Arbib*, 268 F.2d 763, 766, 122 USPQ 530, 532 (CCPA 1959) (Less than 1 month of inactivity during critical period. Efforts to exploit an

invention commercially do not constitute diligence in reducing it to practice. An actual reduction to practice in the case of a design for a three-dimensional article requires that it should be embodied in some structure other than a mere drawing.); Kendall v. Searles, 173 F.2d 986, 993, 81 USPQ 363, 369 (CCPA 1949) (**Diligence requires that applicants must be specific as to dates and facts.**). The period during which diligence is required must be accounted for by either affirmative acts or acceptable excuses. Rebstock v. Flouret, 191 USPQ 342, 345 (Bd. Pat. Inter. 1975); Rieser v. Williams, 225 F.2d 419, 423, 118 USPQ 96, 100 (CCPA 1958) (Being last to reduce to practice, party cannot prevail unless he has shown that he was first to conceive and that he exercised reasonable diligence during the critical period from just prior to opponent's entry into the field)

The affidavits along with Exhibits filed on 10/03/2005 lack diligence. The affidavit of Paul Thomas Peterson filed on 10/03/2005 having a statement for dates including prior to March 20, 2003, April 7, 2003, and April 22, 2003. The affidavit of John Fox filed on 10/03/2005 having a statement for dates including prior to March 20, 2003, during March, 2003, from March to April, 2003, during April, 2003, and by May, 2003. Exhibit A shows April 04, 2003, Exhibit B shows March 25, 2003, Exhibit C shows April 09, 2003 and April 10, 2003, Exhibits E and F show May 19, 2003 and July 14, 2003. Any of the affidavits and Exhibits does not provide an indication of diligence an account of activities occurring between prior to March, 2003 and April 7, 2003 (over two weeks of inactivity), April 7, 2003, and April 22, 2003 (over two weeks of inactivity), May 19, 2003 and July 14, 2003 (over eight weeks of inactivity) and the filing of the above application, e.g., over eleven weeks of an inactive period between July 14, 2003 and October 01, 2003, etc.

Therefore, the affidavits along with Exhibit filed on 10/03/2005 are ineffective to overcome the Bicknell et al reference.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Batal et al., US patent application publication No. US 2003/0221061 A1, and Bicknell et al., US patent application publication No. US 2003/0193776 A1.

As to claims 1 and 23, As to claim 1, El-Batal et al teach each of a plurality of coupling circuits for an ATA storage device, comprising:

a first Serial ATA controller-side transceiver [e.g., analog front end 601 of fig. 6 in a physical layer interface 760 of fig. 7A] receiving a first Serial ATA communication path;

a second Serial ATA controller-side transceiver [e.g., analog front end 601 of fig. 6 in a physical layer interface 761 of fig. 7A] receiving a second Serial ATA communication path;

a Serial ATA device-side transceiver [e.g., analog front end 601 of fig. 6 at the storage device 742 in order to transmit and receive serialized datastream to and from the physical layer interfaces at the controllers side; disks are Serial ATA disks which are inputting and outputting serialized datastream in accordance with a Serial ATA Specification in paragraph 0051]; and

coupling circuit switches [e.g., multiplexer 741] which selectively coupling either the first Serial ATA controller-side transceiver or the second Serial ATA controller-side transceiver to the Serial ATA device-side transceiver based on the logic state of a path control line.

However, El-Batal et al do not expressly disclose a microcontroller in the coupling circuit adapted to control the coupling circuit switches for the selective path connection. Bicknell et al teach a coupling circuit [mux 208 in figs 6-8] each associated with each of Serial ATA disks for selectively coupling a Serial ATA communication path of each Serial ATA disk with a Serial ATA path of one of multiple controllers [controllers 1, 2] by a microcontroller [micro-computer 222 in fig. 8; paragraph 0028] in the coupling circuit adapted to control the coupling circuit switches for the Serial ATA connection. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of El-Batal et al and Bicknell et al because they both teach coupling circuit switches in a coupling circuit for selectively coupling a Serial ATA communication path of each Serial ATA disk with a Serial ATA path of one of multiple controllers and the Bicknell et al's teaching of a microcontroller in the coupling circuit adapted to control the coupling circuit switches for the Serial ATA connection would increase feasibility of Serial ATA communication path control between the two controllers and a Serial ATA disk of El-Batal et al.

7. Claims 3-7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Batal et al and Bicknell et al as applied to claim 1 above, and further in view of Cargemel et al., US patent No. 6,295,609.

As to claim 3, El-Batal et al and Bicknell et al teach do not disclose the microcontroller includes a processor coupled to the coupling circuit switches. However, El-Batal et al and Bicknell et al do not disclose the microcontroller includes a processor coupled to a power switch. Cargemel et al teach a microcontroller includes a processor controlling the power to the storage device [fig. 2; col. 6, line 55-col. 7, line 10]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the Cargemel et al's teaching of a microcontroller includes a processor controlling the power to the storage device into the microcontroller of El-Batal et al and Bicknell et al in order to increase user friendliness of repairing the failed storage device.

As to claim 4, El-Batal et al and Bicknell et al teach the microcontroller includes a processor coupled to a power switch and coupled to the coupling circuit switches; however, El-Batal et al and Bicknell et al do not disclose a set of logics including a set of D flip-flops. It is well known in the art that a set of logics including a set of D flip-flops for simplicity in order to latch a control signal from the microcontroller to simply eliminate burden of the microcontroller maintaining the control signal at the same level until next path change.

As to claims 5 and 22, El-Batal et al and Bicknell et al teach the microcontroller is programmed to as follows switch the coupling circuit to a first storage controller; and switch the coupling circuit to a second storage controller. However, El-Batal et al and Bicknell et al do not disclose power up the storage device; and power down the storage device. Cargemel et al teach [col. 5, lines 3-19; col. 6, line 55-col. 7, line 11] the microcontroller is programmed to as follows:

switch the coupling circuit to a first storage controller; switch the coupling circuit to a second storage controller; power up the storage device; and power down the storage device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the Cargemel et al's teaching of a microcontroller controlling power up/down the storage device into the microcontroller of El-Batal et al and Bicknell et al in order to increase user friendliness of repairing the failed storage device.

As to claim 6, Cargemel et al teach [col. 6, line 55-col. 7, line 11] the microcontroller further programmed to as follows: write data to a memory; read data from the memory; and read the status of the coupling circuit.

As to claim 7, Cargemel et al teach [col. 4, lines 7-13; col. 5, lines 3-19; col. 6, line 55-col. 7, line 11] the status includes information on whether the storage is coupled to the first controller-side or the second controller-side, the storage is powered up or down, the communication status, and/or the board revision and code revision levels of the coupling circuit.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over El-Batal et al. and Bicknell et al. as applied to claim 1 above, and further in view of Deyring et al., US patent application publication No. US 2003/0158991 A1.

As to claim 2, El-Batal et al and Bicknell et al teach a Serial ATA Specification [in Physical Layer Section; paragraph 0005 of El-Batal et al] requires Out Of Band (OOB) signals need to be sent and received at each transceivers in order to detect COMRESET, COMINIT, and COMWAKE during a Serial ATA bus operation. However, El-Batal et al and Bicknell et al do not

expressly disclose activating the first Serial ATA controller-side transceiver, the second Serial ATA controller-side transceiver, and the Serial ATA storage device-side transceiver. Deyring et al teach an out of band squelch control component sending and receiving Out Of Band (OOB) signals sent and received at a transceiver by activating [figs. 1 and 5] the transceiver for a Serial ATA bus operation; and Deyring et al further teach [paragraph 0004] each transceiver is required at each end of the Serial ATA bus. Therefore, it would have been obvious to one of ordinary skill in the art of a Serial ATA bus operation at the time the invention was made to combine the teachings of El-Batal et al, Bicknell et al, and Deyring et al because they both teach a Serial ATA bus operation according to Serial ATA Specification and the Deyring et al's teaching of an out of band squelch control component activating each transceiver in order to send and receive OOB signals for a bus synchronization would increase reliability of El-Batal et al and Bicknell et al's Serial ATA bus operation.

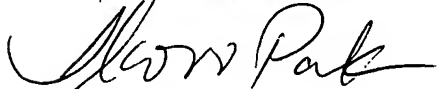
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval

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(PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**ILWOO PARK
PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Ilwoo Park', written in a cursive style.

Ilwoo Park

November 10, 2005